

California Bay-Delta Program

Storage Program Multi-Year Program Plan (Years 5-8)

Implementing Agencies:
Department of Water Resources
United States Bureau of Reclamation

July 2004



Goals, Objectives, and Targets

Goals and Objectives:

The goal of the Storage Program is to expand storage capacity to increase operational flexibility and water supply reliability in an effort to improve water quality and support fish restoration efforts.

The CALFED Record of Decision (ROD) identified six commitments to be met. For each ROD commitment, key objectives have been identified for the Storage Program:

- Development of approximately 250 Thousand Acre Feet (TAF) of In-Delta Storage.
 - Provides fishery benefits and enhances water project flexibility.
 - Could be achieved through implementation of a re-engineered In-Delta storage project that will meet the ecosystem needs in the Delta and provide water supply reliability.
 - State and Federal agencies will make a decision regarding the feasibility of an In-Delta storage project and the appropriateness of initiating negotiations with Delta Wetlands owners or other appropriate landowners for acquisition of necessary property.
 - State and Federal agencies will develop a project plan that addresses local concerns regarding effects on neighboring lands and complete any additional needed environmental documentation.
- Enlargement of Shasta Lake storage by approximately 300 TAF.
 - Increase the pool of cold water available to maintain lower Sacramento River temperatures needed by anadromous fish.
 - Provide other water management benefits, such as water supply reliability.
 - To the extent possible, includes features to benefit other identified ecosystem, flood control, and related water resources needs.
- Expansion of Los Vaqueros Reservoir by up to 400 TAF.
 - Provide water quality and water supply reliability benefits to Bay Area water users.
 - Department of Water Resources (DWR) and U.S. Bureau of Reclamation (Reclamation) are working with Contra Costa Water District (CCWD) and interested stakeholders to assure that previous commitments, including local voter approval required for expansion, are respected.

- Development of up to 1.8 MAF (Million Acre Feet) of North-of-the-Delta Offstream Storage
 - Enhance water management flexibility in the Sacramento Valley while reducing diversions on the Sacramento River during critical fish migration periods.
 - Increases reliability of supplies for a significant portion of the Sacramento Valley.
 - Provides storage and operational benefits for other California Bay-Delta Programs, including water quality and the Environmental Water Account.
- Development of 250 TAF to 700 TAF of Storage in the Upper San Joaquin River Basin.
 - Contribute to the restoration of and improved water quality for the San Joaquin River.
 - Facilitate conjunctive management and water exchanges that improve the quality of water deliveries to urban communities.
 - Improve Central Valley Project (CVP) water supply reliability South- of- the- Delta.
 - Increase flood protection in the San Joaquin Valley.
 - Increase power generation.
- Groundwater Conjunctive Management Projects with Total Capacity of 500 TAF to 1 MAF.
 - Increase water supply reliability statewide through the planned, coordinated local management and use of groundwater and surface water resources.
 - Develop a basic understanding of individual groundwater basins.
 - Identify basin management strategies and objectives.
 - Plan and conduct groundwater studies.
 - Design and construct conjunctive use projects.

Each of these commitments is being assessed individually as well as in coordination with one another to ensure consistent assumptions, review, and coordination with other California Bay-Delta Program goals. As the implementing agencies, DWR and Reclamation are conducting planning and feasibility studies on the five surface storage projects identified as part of the overall water management strategy.

Targets:

The CALFED ROD identified actions to be pursued in Stage 1 to expand storage capacity, which is critical to the successful implementation of all aspects of the CALFED Program. Inadequate State and Federal funding and difficulty in executing consultant contracts have made meeting the aggressive ROD milestones difficult.

Surface Storage Investigations

Lack of adequate State and Federal funding and Federal feasibility study authorization have delayed all the surface storage projects. State General Funds were authorized in Years 1 through 3 of program implementation, but were significantly reduced in Years 2 and 3. Starting in Year 3 (November 2002), the Department of Water Resources (DWR) shifted the source of State funding from General Funds to Proposition 50, which provided \$50 million for surface storage investigations. Also in Year 3, Congress provided Federal feasibility study authorization for the Los Vaqueros Reservoir Expansion, North-of-the-Delta Offstream Storage, and Upper San Joaquin River Basin Storage investigations. The In-Delta Storage program has not received Federal feasibility study authorization.

The Program Manager and program staff briefs the Water Supply Subcommittee on program status on a regular basis. The Subcommittee will make recommendations to the Bay-Delta Public Advisory Committee (BDPAC) as necessary. None of the five surface storage investigations has progressed far enough to allow decisions on which projects, if any, should be implemented. The following table shows the ROD dates for completing environmental review and documentation for the five surface storage projects and the new schedule if full funding were available in the future.

Surface Storage Investigations Schedule¹

Project	Complete Environmental Review and Documentation	
	Published in ROD	Current Schedule
In-Delta Storage	Dec 2002	Jun 2006 ²
Shasta Lake Enlargement	Dec 2004	Sep 2008
Los Vaqueros Reservoir Expansion	Dec 2003	Dec 2007
North-of-the-Delta Offstream Storage	Aug 2004	Jun 2006
Upper San Joaquin River Storage	Jun 2006	Dec 2008

Total estimated investigation costs for all five potential surface storage projects exceed the current funding available. Given that the relatively secure funding for all surface storage planning is limited to about \$20 million remaining in Proposition 50 funds, DWR has prioritized work efforts for the first half of

¹ Sufficient and stable funding are critical for the successful completion of feasibility studies and environmental documentation.

² The current schedule is for a re-engineered In-Delta Storage Project.

Year 5 to minimize expenditures. Work efforts will be re-evaluated as additional analyses and findings are completed.

Efforts common to the five potential surface storage projects for the next six months are:

- Establish formal partnerships through MOU or JPA with project participants;
- Continue developing Common Assumptions to establish standards and methods for analyses; and
- Perform economic review on project analyses and cost and benefit estimates.

Activities for individual projects are listed in the Major Activities section on page 8.

Groundwater Conjunctive Management

The ROD target is to facilitate and fund locally supported, managed, and controlled groundwater and conjunctive use projects with a total of 500 TAF to 1 MAF of additional storage capacity by 2007. Actions for Years 5 – 8 include implementing early stages of the most promising projects by the end of 2004 and aggressively pursuing implementation of additional projects by the end of Stage 1.

If full funding is available, the grants and loans program would continue to provide funding to local agencies to construct conjunctive use projects to develop additional yield to meet the targeted goal. Full program funding would also allow DWR to continue working with local agencies to develop locally controlled and managed groundwater programs and provide oversight on projects awarded funding through the grants and loans program.

Under existing funding levels, DWR would be able to only provide minimal assistance to local agencies for groundwater program development and oversight on projects previously awarded funding through the grants and loans program. No additional grants or loans would be awarded.

Accomplishments

Progress is being made on all five surface storage investigations. However, inadequate funding has been a limiting factor in meeting the schedule outlined in the ROD. Sufficient and stable funding are critical for the successful completion of feasibility studies and environmental documentation for each project. Funding constraints have also delayed grant administration and technical support for local partnerships for the groundwater storage program.

In-Delta Storage

DWR and Reclamation continued technical studies of risk, design, operations, water quality, environmental impacts, benefits, and costs.

DWR released the State Feasibility Study draft reports in February 2004.

Shasta Lake Enlargement

Reclamation completed a Mission Statement Milestone Report in March 2003 and an engineering Break Point Analysis report in June 2003.

A series of stakeholder briefings and public workshops were held in late-2003 to provide information and coordinate issues as they relate to Shasta Dam.

An Initial Alternative Information Report was completed in July 2004.

Los Vaqueros Reservoir Expansion

Completed a Draft Planning Report and 22 supporting technical memoranda in May 2003.

Conducted over 20 public workshops and six CCWD Board meetings to provide information and receive comments on the Draft Planning Report.

The CCWD Board of Directors passed three resolutions authorizing an advisory vote in March 2004.

The advisory vote passed with 63 percent of the voters recommending CCWD continue studies to enlarge Los Vaqueros Reservoir.

North-of-the-Delta Offstream Storage

Completed feasibility engineering studies of conveyance facilities for diverting water into Sites Reservoir and releasing water back to the Sacramento River.

Completed a series of CALSIM II modeling runs exploring potential operational scenarios in 2003.

Completed development of a water quality and temperature model in January 2004.

Completed a draft Flow Regime Technical Advisory Group Summary and Evaluation Report in June 2004.

Upper San Joaquin River Storage

Completed a Phase I Investigation Report including appraisal level evaluations of 17 surface storage alternatives in October 2003.

Met with local stakeholders to identify potential for conjunctive use project and stakeholder interest.

Filed the NOI/NOP and conducted a series of scoping meetings in early-2004.

Groundwater Storage

Feasibility Study Grants - Awarded \$5.8 million of Local Groundwater Management Assistance Act (AB 303) grants to local agencies for 26 groundwater studies and projects in Year 3. Awarded \$6.2 million of Local Groundwater Management Assistance Act (AB 303) grants to local agencies for 28 groundwater studies and projects in Year 4.

Technical Assistance to Locals – Entered into a new MOU with 7 local agency partners and provided technical and financial assistance to existing MOU partners to study the groundwater basins and assess opportunities for conjunctive water management

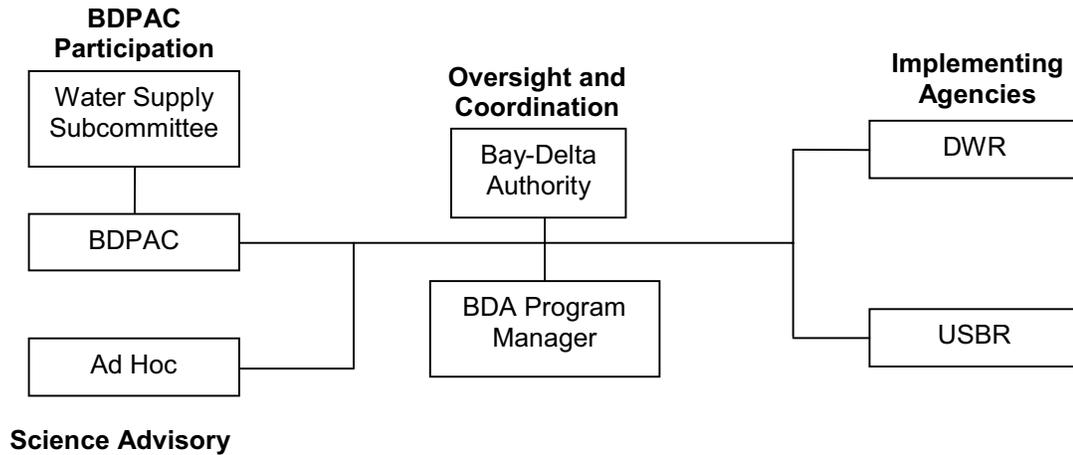
Provided technical and financial assistance to local partners for assessing in-basin needs, development of basin-wide planning and management strategies, project formulation, and commencement of pilot projects.

Provided independent facilitation/mediation services to local partners to improve stakeholder involvement, foster local support for improved groundwater management, and to enhance stakeholder understanding of water resource issues and needs.

Coordinated conjunctive water management activities in the Central Valley with the North-of-the-Delta Offstream Storage and Upper San Joaquin River Basin Storage investigations.

Implementation Grants and Loans - Recommended awarding 17 grants and loans totaling \$85.7 million in Proposition 13 funds for construction projects in Year 4. The estimated average annual yield of the recommended projects is 160 TAF.

Program Structure



Agency	Roles and Responsibilities
California Bay-Delta Authority	<ul style="list-style-type: none"> Oversight and coordination. Lead agency with DWR on Water Management Strategy.
Department of Water Resources	<ul style="list-style-type: none"> Lead agency for California Environmental Quality Act (CEQA) compliance on surface storage projects. Responsible for implementation of groundwater conjunctive management program
U. S. Bureau of Reclamation	<ul style="list-style-type: none"> Lead agency for National Environmental Policy Act (NEPA) compliance on surface storage projects.
Bureau of Indian Affairs	<ul style="list-style-type: none"> Participating agency.
U.S. Fish and Wildlife Service	<ul style="list-style-type: none"> Participating agency.
U.S. Forest Service	<ul style="list-style-type: none"> Participating agency.
National Oceanic and Atmospheric Administration Fisheries	<ul style="list-style-type: none"> Participating agency.
U. S. Army Corps of Engineers	<ul style="list-style-type: none"> Participating agency.
Department of Fish and Game	<ul style="list-style-type: none"> Participating agency.
Glenn-Colusa Irrigation District	<ul style="list-style-type: none"> Management Team Partner in the North-of-the-Delta Offstream Storage.
Tehama-Colusa Canal Authority	<ul style="list-style-type: none"> Management Team Partner in the North-of-the-Delta Offstream Storage.
Contra Costa Water District	<ul style="list-style-type: none"> Manages Los Vaqueros Reservoir Expansion.
Local Groundwater Agency partners	<ul style="list-style-type: none"> Lead agencies for development and implementation of groundwater studies and conjunctive water management projects.

Major Activities

Major activities for the Storage Program in the coming years will be highly dependent on available State and Federal funding. Without sufficient and stable funding, prioritization and potential deferral of specific projects may be required.

In-Delta Storage

Land Appraisal – DWR will complete DGS approved ongoing multi-year land appraisal study for Webb Tract, Holland Tract, Bouldin Island, and Bacon Island.

Schedule: October 2004

Environmental Surveys – DWR will continue great garter snake surveys necessary to avoid data gaps and gather data on continuing basis.

Schedule: December 2004

Public Review Response – DWR will conduct further analysis in response to public comments from the Draft State Feasibility Study (risk analysis, water quality, intake locations and economics). Also, DWR will collect water quality and seepage data on Jones Tract Flooding for use in modeling studies.

Schedule: June 2005

Environmental Documentation – If a decision is made to proceed with further evaluations, work will begin on the Subsequent EIR/EIS.

Schedule: Under existing funding levels, the completion of the Subsequent EIR/EIS will be delayed. If full funding is available, the draft Subsequent EIR/EIS will be completed in December 2005 and a final report completed by July 2006.

Shasta Lake Enlargement

McCloud River Impacts Report – Complete a report on the effects of an enlarged Shasta Lake on the McCloud River.

Schedule: Fall 2004

Issue NOI/NOP – Initiate NEPA and CEQA process and conduct scoping meetings

Schedule: Spring 2005.

Plan Formulation – Develop and evaluate potential projects

Schedule: Complete the Plan Formulation Report in Spring 2006.

Environmental Documentation – Complete the Feasibility Study and EIS/EIR.

Schedule: If adequate funding is available, complete the draft reports in Winter 2007 and the final reports in Fall 2008.

Los Vaqueros Reservoir Expansion

Partnership - Sign Joint Powers Agreement to administer CEQA Process

Schedule : Fall 2004

Issue NOI/NOP - Issue the NOI/NOP for environmental documents.

Schedule: Fall 2004.

Scoping - Initiate scoping for the EIR/EIS and the engineering feasibility studies.

Schedule: Conduct scoping meetings and complete the Scoping Report by Early 2005.

Plan Formulation – Develop and evaluate potential projects

Schedule: Complete the Plan Formulation Report in Spring 2006.

Environmental Documentation – Complete the Feasibility Study and EIR/EIS.

Schedule: Under existing funding levels, studies could not be completed. If full funding is available, complete the draft reports by Winter 2006 and the final reports by Winter 2007.

North-of-the-Delta Offstream Storage

Partnership – Re-evaluate MOU or JPA with local partners

Schedule: Fall 2004

Studies – Complete ongoing engineering and cultural resources studies.

Schedule: Fall 2004

Flow Regime – Finalize Sacramento River flow regime summary report

Schedule: Fall 2004

Alternatives Development – Develop and evaluate potential alternatives.

Schedule: Spring 2005.

Plan Formulation – Formulate and evaluate specific alternatives.

Schedule: Complete the Plan Formulation Report by Summer 2005.

Environmental Documentation – Complete the Feasibility Study and the EIR/EIS.

Schedule: If full funding is available, complete draft reports by Summer 2005 and final reports by Summer 2006. Without adequate funding, the environmental documentation and feasibility study will be delayed.

Upper San Joaquin River Storage

Assess Conjunctive Management Opportunities– Complete report on conjunctive management opportunities

Schedule: Early 2005

Alternatives Development – Develop and evaluate potential alternatives.

Schedule: Complete the Initial Alternatives Information Report by Fall 2004.

Conjunctive Management Options – Complete evaluation of specific conjunctive management options.

Schedule: Fall 2005

Plan Formulation – Formulate and evaluate specific alternatives.

Schedule: Complete the Plan Formulation Report by Summer 2006.

Environmental Documentation – Complete the Feasibility Study and the EIS/EIR.

Schedule: If full funding is available, complete the draft reports by Winter 2007 and the final reports by Winter 2008. Without adequate funding, the schedule will be further delayed.

Groundwater Storage

Feasibility Study Grants – State will review recommended Local Groundwater Assistance Fund project awards, totaling \$6.4 million.

Schedule: Completion by April 2005. Under existing funding levels, DWR would be able to provide oversight on projects previously awarded funding through the grants and loans program. No additional grants would be awarded. If full funding is available, future Local Groundwater Assistance Fund grants would be awarded for groundwater studies, monitoring, and management activities. In addition, oversight of projects previously awarded grant funding would continue.

Technical Assistance to Locals – DWR will continue to work with local agencies to develop locally controlled and managed groundwater programs. In addition, DWR will continue to provide oversight on projects awarded funding through the grants and loans program.

Schedule: Ongoing

Under existing funding levels, DWR would be able to only provide minimal assistance to local agencies for groundwater program development and oversight on projects previously awarded funding through the grants and loans program.

If full funding is available, DWR would continue to work with local agencies to develop locally controlled and managed groundwater programs and provide oversight on projects awarded funding through the grants and loans program.

Implementation Grants and Loans – Available funding from Proposition 50 will be evaluated for groundwater projects and competitive grant programs developed. Funding from Proposition 13 will be committed to projects selected for funding in fiscal year 2003-04.

Schedule: Completion by June 2005.

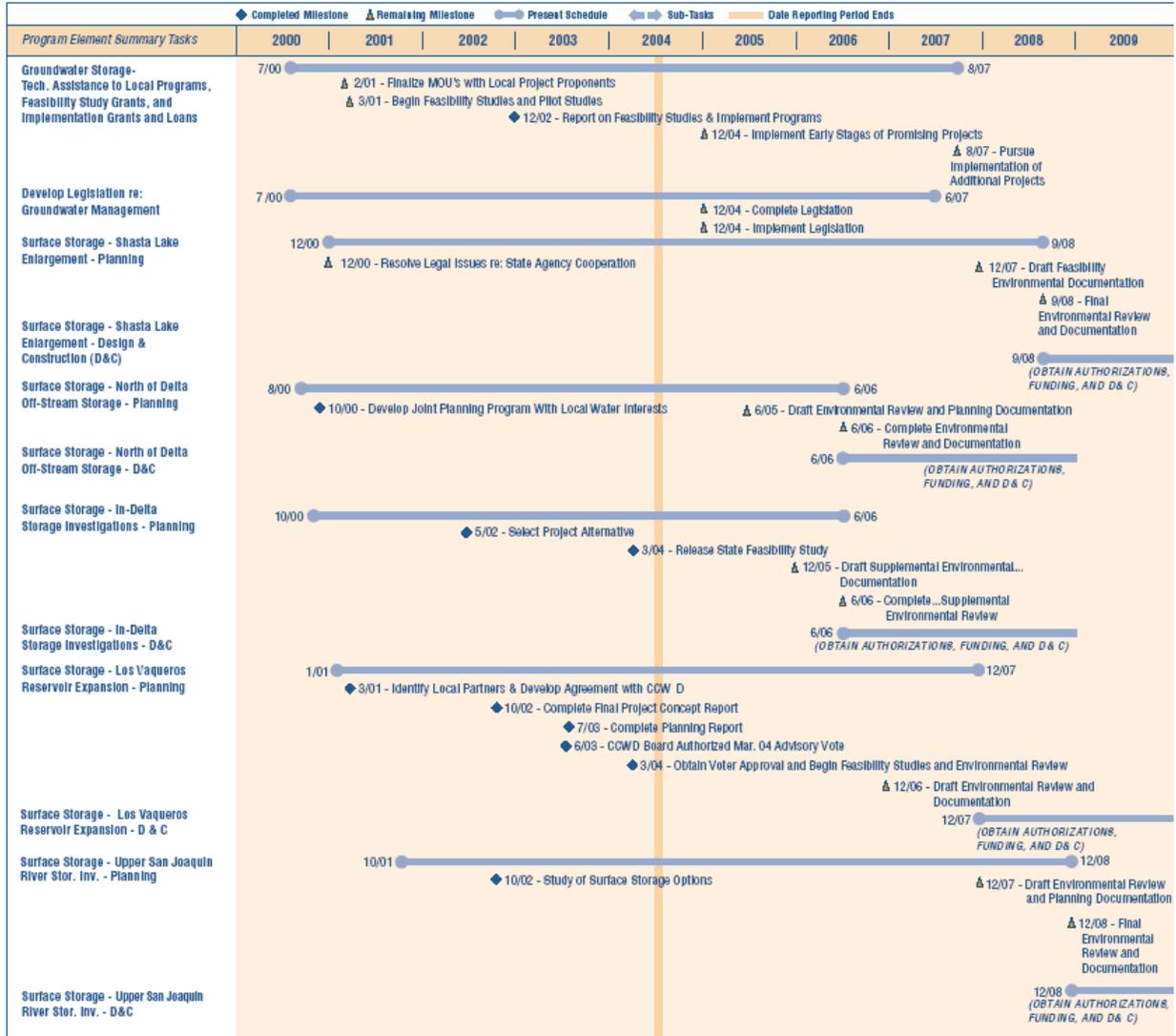
It is anticipated that DWR will implement early stages of the most promising projects by the end of 2004 and aggressively pursue implementation of additional projects by the end of Stage 1.

Schedule: Ongoing

Under existing funding levels, DWR would be able to provide oversight on projects previously awarded funding through the grants and loans program. No additional grants or loans would be awarded.

If full funding is available, the grants and loans program would continue to provide funding to local agencies to construct conjunctive use projects to develop additional yield to meet the targeted goal. DWR would continue to provide oversight on projects awarded funding through the grants and loans program.

Schedule



Integrating Science, Environmental Justice, and Tribal Relations

The planning and development of various actions under the Storage Program will involve a coordinated effort with Science, Environmental Justice, and Tribal Relations. This coordinated effort will occur at the working level as well as the management and oversight levels. Specific project teams and/or committees will be utilized and briefings will be made to respective Bay-Delta Public Advisory Committee subcommittees to ensure the needed project implementation in accordance with the ROD.

Science:

The Science Program will aid in developing Performance Measures; creating a Science Standing Board for the Water Management Programs to advise the CBDA on storage issues including the five surface storage programs, groundwater storage and conjunctive use programs; and also help improve the exchange of information between the Science Program and agencies conducting studies. For example, the Science Program has reviewed the CALSIM II modeling tool, which will be used to evaluate the impacts and benefits of each storage project. The Water Management Science Board may set up steering committees for specialized areas of study for each storage program.

The Science Program sponsored In-Delta Storage Technical Review Panel completed a written review of the 2002 Planning Study Reports for In-Delta Storage. A report on the Science Panel review and DWR/Reclamation response was released in August 2003 at the California Bay-Delta Program Science Workshop. A workshop to review the State Feasibility Study was held in August 2003 and DWR received the Science Panel Review Report in December 2003. The technical review panel is providing guidance to meet the short-term and long-term objectives for resolving the water quality issues. DWR convened an independent board of consultants which completed a review of the 2002 Planning Study in December 2001 and the 2003 Planning Study in May 2003.

A separate science review panel will be convened in 2005 to review the Flow Regime Technical Advisory Group Summary and Evaluation Report for North-of-the-Delta Offstream Storage. The report summarized the studies on the upper Sacramento River identified by the TAG and evaluated the changes in the Sacramento River hydrology based on historical observations. In addition, the report considered flow regime modifications and improvements on the Sacramento River using Sites Reservoir. On the engineering studies, DWR convened an independent board of consultants to review the feasibility-level engineering studies for Sites Reservoir in January 2003. DWR will also convene an independent board of consultants to review the engineering designs during preliminary and final design.

It has not been determined at this time, how the Science Program will be incorporated into the planning process for the Shasta Lake Enlargement, Los Vaqueros Reservoir Expansion, and Upper San Joaquin River Basin Storage investigations. The projects will participate in the peer review process for the overall storage program once that has been established. Quality control and assurance is being incorporated in all technical and scientific investigations for these planning studies.

The Surface Storage Program has been reporting the progress of planning efforts to CALFED committees and project stakeholders. Specific project contributions to supply reliability, Delta and local drinking water quality, and ecosystem restoration have been published. The Program has been developing Common Assumptions to establish standard methods and models necessary to perform further hydrologic, water quality and economic analysis. These analyses will provide a common baseline to 1) compare specific project contributions to local and system wide supply reliability, water quality and ecosystem restoration 2) estimate system wide cumulative benefits, and 3) prioritize projects if necessary. Site specific, regional, and system-wide performance measures will be jointly developed from these data with input from project stakeholders and guidance from CBDA.

Performance Measures

Performance measures translate program goals and objectives into measurable benchmarks of success. Performance measures range from relatively simple metrics (such as project expenditures) to complex cross program assessments (such as water supply reliability). As such, current work on Performance Measures includes counting the simple metrics and laying the technical and scientific groundwork that will allow us to perform more complex assessments later.

The Science Program and the Storage Program have been continuously working to design performance measures for the program. The Science Program has articulated the following three levels of Performance Measures. These will be refined as they are tailored for the unique needs of each program. For Storage, examples of performance measures include:

- **Level 1: Simple administrative measures.** Site-specific indicators that track direct responses of specific projects or groups of projects (such as number of dollars spent and the number of projects funded).
- **Level 2: Quantifiable accomplishments directly related to program actions.** Indicators that track the responses of groups of projects on a local or regional level (such as acre-feet of conserved or storage water, miles improved levees, or fish counts).
- **Level 3: System-wide indicators.** Indicators that track broad, often complex, responses of groups of projects (such as water supply reliability or ecosystem health).

Because Level 3 measures gauge the combined effects of several Program Elements, the Storage Program will contribute to the Science Programs ongoing work in this area. The Storage Program is tracking Level 1 indicators related to expenditure and progress on the surface storage investigations and expenditures and number and type of groundwater conjunctive use projects.

Level 2 indicators related to the five potential surface storage projects are being developed through collaborative work groups and peer review as part of the Common Assumptions effort. In the context of the Common Assumptions work, these indicators are referred to as the following common reporting metrics for all the surface storage investigations. Regional and site specific Level 2 Performance Measures are under development and a priority activity for Year 5.

Water Supply Reliability

Sacramento Valley	
CVP Ag	Long-Term Average and Driest Years Contract Delivery (TAF/yr)
CVP M&I	Long-Term Average and Driest Years Contract Delivery (TAF/yr)
Bay Area	
CVP Ag	Long-Term Average and Driest Years Contract Delivery (TAF/yr)
CVP M&I	Long-Term Average and Driest Years Contract Delivery (TAF/yr)
SWP M&I	Long-Term Average and Driest Years Contract Delivery (TAF/yr)
San Joaquin Valley (not including San Joaquin River and its tributary's water users)	
CVP Ag	Long-Term Average and Driest Years Contract Delivery (TAF/yr)
CVP M&I	Long-Term Average and Driest Years Contract Delivery (TAF/yr)
SWP Ag	Long-Term Average and Driest Years Contract Delivery (TAF/yr)
GW Banking	Long-Term Average Delivery (TAF/yr)
South Coast	
SWP M&I	Long-Term Average and Driest Years Contract Delivery (TAF/yr)
Level 2 Refuge	
NOD	Long-Term Average and Driest Years Contract Delivery (TAF/yr)
SOD	Long-Term Average and Driest Years Contract Delivery (TAF/yr)

Water Quality

San Joaquin River	
Vernalis	Monthly EC (umhos/cm)
Delta	
All Compliance Locations	Long-Term Average and Driest Years EC (umhos/cm), Bromide (mg/L), and TOC (mg/L)
Bay Area	
M&I Intake Locations	Long-Term Average and Driest Years EC (umhos/cm), Bromide (mg/L), and TOC (mg/L) (Flow Weighted)
Delta Export	
Tracy	Long-Term Average and Driest Years EC (umhos/cm), Bromide (mg/L), and TOC (mg/L)
Banks	Long-Term Average and Driest Years EC (umhos/cm), Bromide (mg/L), and TOC (mg/L)

Ecosystem

Sacramento River	
	Temperature (% months > criterion and/or May storage conditions for Long-Term Average and Driest Years)
Delta	
X2 Location	February thru June Long-Term Average and Driest Years X2 Location (km from Golden Gate)
Reverse/X-Delta Flow	Qwest
Delta Outflow	March thru May Long-Term Average and Driest Years Delta Outflow (TAF/yr)
EWA	Long-Term Average, Driest Years, and Wet Years Quantity (TAF/yr) and Location (NOD or SOD)
Level 4 Refuge	
NOD	Long-Term Average and Driest Years Delivery (TAF/yr)
SOD	Long-Term Average and Driest Years Delivery (TAF/yr)

Delta Stage and Scouring

Stage	Water Surface Elevation (feet)
Scouring	Velocity (feet/second)

Cost Estimates

Capital Cost	(2004 \$)
Annual O&M	(2004 \$)

The Conjunctive Water Management Program (CWMP) will coordinate with the Science Program in developing Level 2 Performance Measures to assess feasibility studies and project implementability, and in determining potential benefits and beneficiaries to ensure program consistency by June 2005. Performance measure standards will consider criteria for completion and conclusions of feasibility studies conducted, economic efficiency, environmental benefits provided, meeting local, regional, and statewide needs, and contributions to increasing local water supply reliability and increasing water quality. The program has coordinated with the Science Program in development of Proposal Solicitation Process (PSP) reviews. The CWMP will help fund and coordinate with the Water Science

and Technology Board of the National Research Council on a study of "Sustainable Underground Storage of Recoverable Water." The proposal will provide guidance to the State and local agencies in addressing scientific issues and limitations in the effective use of groundwater storage.

Environmental Justice:

Environmental Justice (EJ) is one of the implementation commitments of the ROD. An investigation and evaluation of environmental justice issues are key elements of the Surface Storage Program. The agencies will be preparing workplans for surface storage investigations. Meanwhile, the California Bay-Delta Authority BDPAC EJ Subcommittee is developing a set of guidelines applicable to each program. Staff at DWR and Reclamation are active participants in the development of these guidelines. One example of an EJ investigation relates to the effects and impacts of a Surface Storage Program on the livelihood of farmworkers in the Delta.

Program staff is involved with and participates in meetings of the California Bay- Delta Authority BDPAC Environmental Justice Subcommittee, DWR's Environmental Justice Workgroup and the Environmental Justice Steering Committee of the Governor's Office of Planning and Research.

DWR is providing EJ training to DWR program managers and staff to support them in gaining a basic understanding of EJ issues and to assist them in identifying and acting on potential issues within their programs. This training will also help managers to become aware of the tools available to strengthen their investigations and decisions.

Conjunctive use projects have the potential to impact private well owners, reliability of local water supplies, and local economies. Efforts should be made to build the capacity of those potentially affected to review and comment on environmental documentation.

Tribal Relations:

The Surface Storage Program has initiated tribal coordination efforts as part of several of the surface storage investigations. Tribal consultation is one of a number of Implementation Commitments of the ROD and implementing agencies are prepared to consult with federally recognized tribes on a government-to-government basis. The ROD notes specifically that CALFED agencies will enter into formal agreements (such as Memoranda of Understanding) at the request of federally recognized tribal governments to participate in project planning. Reclamation is responsible for compliance with Section 106 of the National Historic Preservation Act and has a trust responsibility to assess potential impacts to Indian Trust Assets for investigations where they have received feasibility authority. Specifically, Reclamation will work collaboratively with federally recognized tribes and the Bureau of Indian Affairs to analyze potential trust impacts.

Reclamation, DWR, and a number of tribes have been meeting as part of a coordination effort associated with the North-of-the-Delta Offstream Storage (NODOS) investigation. The tribes and agencies have developed a Guiding Principles document for working with tribes on NODOS. Tribes have also participated in and reviewed historical and cultural resources studies associated with the investigation. The agencies have given regular updates of the investigation status. BIA has also

requested and been granted cooperating agency status associated with development of the Environmental Impact Statement. A number of tribes are developing water resources studies to assist in evaluating potential project effects and benefits. In addition, Reclamation has initiated a coordination effort with a number of tribes associated with the Shasta Lake Water Resources Investigation and the Upper San Joaquin River Basin Storage Investigation. In the Upper San Joaquin River Basin Storage Investigation, Reclamation has committed to meet with 5 Indian tribes periodically to address any Indian Trust Asset responsibility, sensitive cultural resource issues, and to identify beneficial opportunities for the tribes.

The California Bay-Delta Authority, surface storage program staff from DWR and Reclamation, and the tribes participated in a Tribal Forum on February 26, 2004. Authority and program staff described outreach efforts to date and received comments from tribes to improve coordination efforts. A briefing on the CBDA Environmental Justice program was included. There are currently two tribal BDPAC members. Input to the BDPAC through these members should be made available to all tribes with the assistance of the CBDA's Tribal Coordinator.

Cross-Program Relationships

The Storage Program's integration with other California Bay-Delta Program elements requires a balanced approach for linkages with shared State and Federal water management of the State Water Project (SWP) and CVP systems. The program is linked with local and regional agencies for resource management in the Delta.

Conveyance – Coordination with the individual storage programs and coordination with the Conveyance Program is ongoing.

Drinking Water Quality – Specific storage programs looking at water quality improvements include NODOS, Los Vaqueros Expansion, and the Upper San Joaquin River Basin Storage Investigations.

Levee System Integrity – The In-Delta Storage program is linked with the Delta Levee Program.

Ecosystem Restoration – Coordination with the Ecosystem Restoration Program regarding the In-Delta Storage, Upper San Joaquin River Basin Storage, NODOS, and Los Vaqueros Expansion is ongoing. DWR and Reclamation will inform and consult with the Working Landscapes Subcommittee of BDPAC, California Department of Food and Agriculture, Department of Conservation, and local interest groups as the project(s) develop.

Environmental Water Account (EWA) – Coordination with the EWA office is regular and ongoing with the In-Delta Storage, Los Vaqueros Reservoir Expansion, NODOS, and groundwater storage programs.

Water Use Efficiency – Coordination between the Water Use Efficiency program and Groundwater Conjunctive Management is ongoing, and will be increased to address linkages between water application and groundwater recharge. In addition, surface storage program will coordinate with WUE when developing common assumptions and cumulative impact analyses.

Water Transfer – Individual storage programs will coordinate with the Water Transfer Program as needed.

Funding

Storage ¹ (\$ in millions)	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Grand Total
State ²	\$87.5	\$114.5	\$20.3	\$37.3	\$105.2	\$0.3	\$0.3	\$0.3	\$365.6
Federal ³	\$1.8	\$10.9	\$7.5	\$5.0	\$2.5				\$27.7
Local ⁴					\$263.0				\$263.0
Available Funding Total	\$89.3	\$125.5	\$27.8	\$42.2	\$370.7	\$0.3	\$0.3	\$0.3	\$656.3
Projected Needs Estimate ⁵	\$50.0	\$75.0	\$138.0	\$208.0	\$384.1	\$83.6	\$77.0	\$272.9	\$1,288.6
Original ROD Estimate (Aug, 2000) ⁶	\$50.0	\$75.0	\$138.0	\$208.0	\$266.0	\$349.0	\$339.0		\$1,425.0

NOTES:

- Funding for Years 1 - 3 reflect actual State, Federal and Local obligations, commitments, encumbrances and expenditures updated to reflect actual fund amounts for each task. State funds for Years 4 & 5 reflect the Governor's Budget May Revision. Federal funds are the Year 4 enacted and President's FY 2005 proposed budget. Projected funding shown in Years 6 - 8 includes remaining estimates for State bond funds, ongoing State base funding, and local matching to grants for years where bond funding is available. Federal appropriations beyond Year 5 are unknown.
- The State budget includes funding for the California Bay-Delta Authority (Authority), Department of Water Resources (DWR), and the Department of Fish and Game (DFG).
- The Federal budget includes funding for the U.S. Bureau of Reclamation (Reclamation). This includes Water and Related Resource funding (W&RR) funds designated by Congress for the CVP Yield Feasibility Investigations and can provide funding for any or all Storage Program tasks. This amount is included in the Oversight & Coordination task.
- Local grant matching funds are estimated and updated as information becomes available.
- The Projected Needs Estimates are based on funding targets from the 10-year finance plan (July 2) and may change based on completion of the plan in November 2004. Projected Needs Estimates include estimates for design and beginning construction of all 5 surface storage projects.
- Original ROD Estimate represents the original Stage 1 (Years 1-7) funding estimates from the Record of Decision (Aug 2000).

Funding by Task

Storage ¹ (\$ in millions)	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Grand Total
1) Feasibility Study Grants	\$15.7	\$0.2	\$5.9	\$6.4	\$6.4				\$34.6
2) Technical Assistance to Local	\$4.8	\$2.7	\$0.9		\$1.9				\$10.3
3) Implementation Grants and Loans	\$54.0	\$102.0	\$4.1	\$10.6	\$340.3				\$511.1
4) Shasta Lake Enlargement	\$1.0	\$1.8	\$2.1	\$1.2	\$0.7				\$6.8
5) North-of-the-Delta Offstream Storage	\$8.4	\$6.0	\$5.4	\$9.0	\$8.7				\$37.6
6) In-Delta Storage Investigations	\$2.6	\$2.1	\$2.2	\$3.7	\$2.0				\$12.6
7) Los Vaqueros Reservoir Expansion	\$0.8	\$5.7	\$3.1	\$6.7	\$4.8				\$21.1
8) Upper San Joaquin River Storage Investigations	\$0.9	\$2.9	\$2.2	\$2.3	\$2.5				\$10.8
9) Oversight & Coordination ²	\$1.1	\$2.0	\$1.8	\$2.4	\$3.3	\$0.3	\$0.3	\$0.3	\$11.4
Available Funding Total	\$89.3	\$125.5	\$27.8	\$42.2	\$370.7	\$0.3	\$0.3	\$0.3	\$656.3
Projected Needs Estimate ³	\$50.0	\$75.0	\$138.0	\$208.0	\$384.1	\$83.6	\$77.0	\$272.9	\$1,288.6
Original ROD Estimate (Aug, 2000) ⁴	\$50.0	\$75.0	\$138.0	\$208.0	\$266.0	\$349.0	\$339.0		\$1,425.0

NOTES:

1. Funding for Years 1 - 3 reflect actual State, Federal and Local obligations, commitments, encumbrances and expenditures updated to reflect actual fund amounts for each task. State funds for Years 4 & 5 reflect the Governor's Budget May Revision. Federal funds are the Year 4 enacted and President's FY 2005 proposed budget. Projected funding shown in Years 6 - 8 includes remaining estimates for State bond funds, ongoing State base funding, and local matching to grants for years where bond funding is available. Federal appropriations beyond Year 5 are unknown.

2. The Federal budget includes funding for the U.S. Bureau of Reclamation (Reclamation). This includes Water and Related Resource funding (W&RR) funds designated by Congress for the CVP Yield Feasibility Investigations and can provide funding for any or all Storage Program tasks. This amount is included in the Oversight & Coordination task.

3. The Projected Needs Estimates are based on funding targets from the 10-year finance plan (July 2) and may change based on completion of the plan in November 2004. Projected Needs Estimates include estimates for design and beginning construction of all 5 surface storage projects.

4. Original ROD Estimate represents the original Stage 1 (Years 1-7) funding estimates from the Record of Decision (Aug 2000).

Geographical Distribution of Activities



POTENTIAL STORAGE PROJECTS

